

REMARKS

The Examiner's Action mailed on October 7, 2003, has been received and its contents carefully considered.

In this Amendment, Applicants have canceled claims 3 and 4, amended claim 1 to include the subject matter of canceled claims 3 and 4, and amended claims 8 and 9 to change their dependency to claim 1. Claim 1 is the independent claim. Claims 1, 2 and 5-9 remain pending in the application. For at least the following reasons, it is submitted that this application is in condition for allowance.

The Examiner's Action has objected to claim 3 for an informality. Because claim 3 has been canceled, this objection has been rendered moot.

The Examiner's Action has rejected all of the claims as either being anticipated by or otherwise rendered obvious in view of *Reinhart* (USP 5,190,714). Because claims 3 and 4 have been canceled, Applicants will treat these rejections as only pertaining to claims 1, 2 and 5-9. It is submitted that these claims are patentably distinguishable over the cited reference for at least the following reasons.

Applicants' independent claim 1 is directed to a clamping unit which includes, *inter alia*, a belt-gear mechanism, and a ball screw transmission mechanism. The ball screw transmission mechanism includes a ball screw, a connector device, and a rotatable guide device. The rotatable guide device is connected to the belt-gear mechanism. Further, the guide device is formed with a threaded hole for allowing the ball screw to be inserted through the threaded hole, and the guide device is sleeved about one end of the ball screw so that when the guide device is rotated by the belt-gear mechanism, the ball screw is caused to move in an axial direction. Further, the

connector device is affixed to the other end of the ball screw, and is formed with at least a front bearing device. Moreover, the guide device is surrounded by at least a rear bearing device, so as to allow the two ends of the ball screw to be firmly supported for a stable operation.

Reinhart discloses a mold clamping system configured pursuant to two different embodiments. In the first embodiment, a non-rotatable ball screw 76 is provided which is attached to a movable crosshead 38. Ball screw 76 is driven using a pair of electric motors 82, 84 which drive respective ball nuts 90, 92, each of which is rotatably carried on the ball screw 76 and are adapted to be rotatably engaged therewith. This reference discloses providing thrust bearings 102 adjacent to the ball nuts 90, 92, so as to space the ball nuts from the rear wall 80 of a die height platen 22. In a second embodiment, this reference discloses separately driving a rotatable ball screw 101 and/or a ball nut 105 using various motors. However, and in contrast to the present invention, this reference does not disclose or otherwise suggest a guide device that is surrounded by at least a rear bearing device, nor does this reference disclose or suggest a connector device that is peripherally formed with at least a front bearing device, with the resulting configuration allowing two ends of the ball screw to be firmly supported for stable operation, as recited by Applicants' independent claim 1.

The Examiner's Action has equated the ball nuts 92, 105 as being a guide device, and the thrust bearing 102, 107 as being a rear bearing device, as recited by claim 1. However, it is noted that there is no disclosure or suggestion from this reference that these thrust bearings surround the ball nuts, as would be required by Applicants' independent claim 1. As such, these thrust bearings do nothing to support

the end of the ball screw for stable operation, as recited by Applicants' independent claim 1.

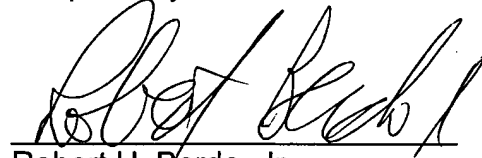
Moreover, the reference does not disclose or otherwise suggest that a connector device is peripherally formed with at least a front bearing device, as recited by Applicants' independent claim 1. Although the Examiner's Action states that such bearing device would be obvious to facilitate the rotatable mounting of the ball screw to the crosshead, it is noted that even if such assertion is true, that the resulting configuration would not result with a front bearing device being peripherally formed around a connector device as recited by claim 1. Instead, based on the motivation provided by the Examiner's Action, the bearing device would be formed internal to the movable crosshead for the rotatable supporting of the ball screw. Furthermore, it is noted that this reference discloses that the movable crosshead is slidably carried on a pair of vertically spaced, parallel crosshead guide rods 40. Thus, there would have been no motivation for one skilled in the art to have peripherally formed the crosshead with a front bearing device to firmly support the ball screw for stable operation, as recited by Applicants' independent claim 1. As such, it is submitted that Applicants' independent claim 1 is *prima facie* patentably distinguishable over the cited reference. It is thus requested that this claim, and the claims dependent therefrom, be allowed and it is further requested that these rejections be withdrawn.

It is submitted that this application is in condition for allowance. Such action and the passing of this case to issue are requested.

Should the Examiner feel that a conference would help to expedite the prosecution of the application, the Examiner is hereby invited to contact the undersigned counsel to arrange for such an interview.

Respectfully submitted,

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Date



Robert H. Berdo, Jr.
Registration No. 38,075
RABIN & BERDO, PC
Customer No. 23995
Telephone: 202-371-8976
Facsimile: 202-408-0924

RHB:crh